CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER 97-039

RESCINDING SITE CLEANUP REQUIREMENTS ORDER 90-063

FORD MOTOR COMPANY
MILPITAS FACILITY
MILPITAS, SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter the Board) finds that:

1. **Scope of Order:** This Order acknowledges the completion of site investigation and remedial activities conducted by Ford Motor Company (hereinafter referred to as the discharger) pursuant to Site Cleanup Requirements (SCR), Order 90-063. This Order also affirms closure of all areas of concern and deems acceptable all reports submitted by the discharger as final. This Order acknowledges implementation of a site management plan. Furthermore, this Order rescinds Order 90-063, removing the site from Site Cleanup Requirements.

2. **Site Location and Description:** The former Ford Motor Company (Ford) assembly plant (Site) is located at 1100 South Main Street in the City of Milpitas, Santa Clara County (see Figure 1). The parcel encompasses approximately 154 acres of flat lying land located at the intersection of South Main Street and Capitol Avenue. The former assembly plant was redeveloped, in part, to become the Great Mall of the Bay Area. The former assembly plant property also contains several undeveloped out-parcels that will become stand alone developments.

3. **Site History:** Ford purchased the Site in 1953 from Western Pacific Railroad. The building that currently exists and was formerly used for the assembly plant and now houses the Great Mall of the Bay Area was built in 1953. The former assembly plant was in operation at this site from approximately 1955 to 1983. The Site was sold to Mariani Financial Corporation in 1984 and subsequently re-acquired by Ford in 1988. In 1994 the Site was remodeled into the Great Mall of the Bay Area.

   During the period when the Site was used as an assembly plant chemical handling activities included use of solvents, paints and thinners, and storage and distribution of gasoline as well as lube and hydraulic oils. In addition, an industrial waste treatment system was operated at the plant, which fed treated waste into onsite wastewater

lagoons. These lagoons were closed by the California Department of Health Services in 1984. During the operation of the facility, releases of primarily gasoline from the Executive Gas Tank and the Pump Number 1 areas occurred which impacted shallow groundwater beneath the Site.

4. **Named Dischargers and Regulatory Status:** Ford Motor Company, is referred to as a discharger, because it was the owner and operator of the site during which time releases of chemicals occurred. The Board adopted Site Cleanup Requirements (SCR) Order 90-063 for the Site. This Order required Ford to define the lateral and vertical extent of soil and groundwater pollution, propose and implement final cleanup objectives and actions.

5. **Adjacent Facilities:** Two facilities are located adjacent to and upgradient of the Site: North American Transformer (NAT) and Jones Chemicals Inc. (Jones). NAT, located immediately adjacent and upgradient to the east of the Site, operates a facility for the production of large electrical transformers. Jones, located east and upgradient of the NAT facility, operates a chemical storage and distribution facility (see Figure 1). The RWQCB has issued Site Cleanup Requirements Orders to both NAT and Jones. Remedial activities are being conducted by those parties pursuant to the requirements of their respective Orders.

6. **Offsite Plumes:** A release affecting soil and groundwater from the transformer oil pipeline area at NAT, containing primarily petroleum hydrocarbons as transformer oil and petroleum naptha is confined to the NAT property. A plume of chlorinated solvents originating from a 1982 spill on the Jones property has migrated across NAT and onto the upgradient edge of the Ford property. The Jones remediation system consists of two rows of extraction wells on the NAT property, upgradient of the transformer oil pipeline area and an additional row on the upgradient edge of the Great Mall property.

7. **Site Geology and Hydrology:** The site is located within the Coast Range geomorphic province at the northern extent of the Santa Clara Valley and the southern portion of San Francisco Bay. The ground surface is relatively flat, with a gentle slope toward the northwest. The surface water on this site, Penitencia and Coyote Creeks, are located approximately 650 feet and 1.2 miles, respectively, west of the property (see Figure One). The facility is underlain by a series of alluvial plain deposits comprised primarily of silt and clay. The dominant soil type found in the shallow borings is a gray to black silty clay with occasional thin sandy lenses. These sandy lenses, encountered in borings between depths of approximately 5 and 25 feet, comprise the A-level aquifer. Clayey to silty sands comprising the B-level aquifer underlie the near-surface clay section. These sands are encountered in deeper borings at depths between 30 and 51 feet. The aquitard separating the A- and B-aquifers is a silty clay unit, believed to be approximately 10 feet thick. The hydrogeologic data from monitoring wells indicated northwesterly flow of the groundwater in both the A- and

B-level aquifers.

8. **Soil and Groundwater Investigation and Remedial Activities:** Soil and groundwater investigation and remediation activities have been ongoing at the Site since the early 1980s (Note: investigation and remediation activities are documented in detail in the reports referenced in Finding 9 below).

   a. Soil: Soil investigation and remediation activities were conducted at the Site, beginning in 1982, with investigations in areas where chemicals had been used or stored. Affected soil at the Site was excavated and either removed from the Site or remediated.

   b. Groundwater: The primary groundwater impacts onsite were related to releases of gasoline from two underground storage tanks (USTs): the Executive Gas Tank and the Pump Number 1. The former Executive Gas Tank supplied fuel to a pump outside the executive garage for fueling the executive automobiles. The 2,000 gallon UST was used from 1954 until the facility was closed in 1983.

      The Pump Number 1 UST and associated pump were located outside and adjacent to the plant. This former 20,000 gallon UST supplied a pump located adjacent to the plant building. This UST operated from 1954 to 1983. Multiple releases occurred during the operation of this UST when vehicles collided with its associated pump.

      In 1989 a slurry wall, groundwater extraction trench and treatment system was installed to prevent the possibility of off-site migration. In 1994 an in-situ bioremediation system was installed to enhance the rate of biodegradation of petroleum hydrocarbons.

9. **Documents Submitted to the Board:** Ford has submitted several reports to the Board regarding investigation and remediation activities at the Site. Several of these reports were submitted prior to the adoption of SCR Order 90-063. Sections 9.a. and 9.b. below list the primary documents which have been prepared to address soil and groundwater investigation and remediation issues at the Site.

   a. Prior to adoption of SCR Order 90-063 Ford submitted the following primary documents to the Board concerning the Site:

      - Hydrogeologic Report, EMCON, August 1985;

      - Interim Remedial-Action Alternatives Analysis, EMCON, April 1987; and,

- Crystal Lake Site Characterization Status Report, Milpitas, California, Wahler Associates, October 1989.

b. Subsequent to adoption of SCR Order 90-063 Ford submitted the following primary documents to the Board concerning the Site:

- Soil Health-based Clean-up Levels for Ford Motor Company Automobile Assembly Facility in Milpitas, California, ChemRisk A Division of McLaren/Hart, December 16, 1991;

- Proposed Final Cleanup Objectives and Actions, Former Ford Automobile Assembly Plant, Milpitas, California, McLaren/Hart, December 16, 1991;

- Drilling and Air-Injection Well Installation Report, Former Ford Motor Company Assembly Plant, 1100 South Main Street, Milpitas, California, Geraghty & Miller, Inc., September 19, 1994;

- Phase I and II Soil Investigation Report, Former Ford Automobile Assembly Plant, Milpitas California, McLaren/Hart Environmental Engineering, September 30, 1996;

- Soil Remediation Summary Report For Former Ford Automobile Assembly Plant at Milpitas, California, McLaren/Hart Environmental Engineering, September 30, 1996; and,

- Groundwater Quality Investigation Report, Former Ford Automobile Assembly Plant, 1100 South Main Street, Milpitas, California, Geomatrix Consultants, Inc., September 1996.

10. **Basis for Cleanup Standards**

a. **General**: State Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," applies to this discharge and requires attainment of background levels of water quality, or the highest level of water quality which is reasonable if background levels of water quality cannot be restored.

Regional Board Resolution No. 89-39, "Sources of Drinking Water," defines potential sources of drinking water to include all groundwater in the region, with limited exceptions for areas of high TDS, low yield, or naturally-high contaminant levels. Groundwater underlying and adjacent to the site qualifies

as a potential source of drinking water.

State Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304," applies to this discharge.

The Executive Director of the State Water Resources Control Board, issued a letter dated December 8, 1995 to all Regional Boards and local oversight program agencies, concerning the Lawrence Livermore National Laboratory Report on Leaking Underground Storage Tank Cleanup. The letter stated "For cases affecting low risk groundwater (for instance, shallow groundwater with a maximum depth to groundwater less than 50 feet and no drinking water wells screened in the shallow zone within 250 feet of the leak) we recommend that active remediation be replaced with monitoring to determine if the fuel leak is stable". The discharger has completed a groundwater monitoring program indicating that the plume is stable and concentrations are decreasing. Therefore, further monitoring by the discharger is no longer necessary at this site and the case should be closed.

This Order and its requirements are consistent with the provisions of State Board Resolution No. 68-16, Regional Board Resolution No. 89-39, State Board Resolution No. 92-49, as amended, and the State Board letter of December 8, 1995.

b. **Basis for Soil Cleanup Standards**: The Board's cleanup goal for total volatile organic compounds (VOCs) in soil is 1 mg/kg. No cleanup goals have been established by the Board for non-BTEX petroleum hydrocarbons in soil. However, cleanup goals may be proposed based on site specific data. If site specific soil cleanup goals are proposed, the discharger must demonstrate through risk assessment that those levels will not threaten the quality of waters of the State, and that human health and the environment are protected. The discharger has conducted a risk assessment and proposed and implemented risked based cleanup standards for soil.

c. **Basis for Groundwater Cleanup Standards:** In general, Maximum Contaminants Levels (MCLs) are the cleanup standards for contaminants of concern in groundwater, including BTEX compounds found at the Site. However, guidelines issued by the State Water Board and supplemental instructions issued by this Board allow for alternative cleanup strategies in areas where groundwater meets specific criteria for "low risk". In addition, no cleanup standards are established for non-BTEX dissolved phase petroleum hydrocarbons in groundwater. It is recognized that low concentrations of petroleum hydrocarbons including BTEX may persist in groundwater but in some instances where demonstrated by site specific risk assessment they are not

considered to represent a threat to human health or the environment. Remaining residuals of these compounds at this site appear to be amenable to natural biodegradation and will continue to degrade with time.

d. **Beneficial Uses and Associated Water Quality Objectives:** The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20, 1995, and November 13, 1995, respectively. A summary of regulatory provisions is contained in 23 CCR 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.

The Basin Plan designates the following potential beneficial uses of groundwater underlying and adjacent to the site:

o Municipal and domestic water supply
o Industrial process water supply
o Industrial service water supply
o Agricultural water supply

At present, there is no known use of groundwater underlying the site for the above purposes

11. **Risk Assessment**: SCR Order 90-063 set forth a cleanup objective of 1 mg/kg total VOCs in soil. The Order also allowed for alternative cleanup levels to be proposed provided that human health and water quality remain protected. Ford in response to the Order conducted a risk assessment to determine alternative cleanup levels (Soil Health-based Clean-up Levels for Ford Motor Company Automobile Assembly Facility in Milpitas, California, ChemRisk A Division of McLaren/Hart, December 16, 1991). The risk assessment for carcinogenic compounds was based on a target risk level of 1 X 10^{-6}. For noncarcinogens cleanup levels were based on Hazard Index of 1. The discharger has completed the remediation of soil to these risk-based cleanup levels.

12. **Site Closure Activities:** In order to implement and document closure activities at the Site Ford has submitted the following documents to the Board:

- Site Closure Report, Former Ford Automobile Assembly Plant, 1100 South Main Street, Milpitas, California, Geomatrix Consultants, Inc., November 1996. This report summarizes the investigation and remedial activities conducted by Ford at the site from 1982 to the present. This report reviews these response actions and discusses the status of residual petroleum hydrocarbons identified

and remediated at the site. The report further evaluates the site relative to the "low risk" hydrocarbon case criteria and concluded that this criteria has been met and the case should be closed.

- Site Management Plan, Former Ford Automobile Assembly Plant, 1100 South Main Street, Milpitas, California, Geomatrix Consultants, Inc., March 1997. This report summarizes the site history, investigation and remedial activities, human health and ecological risk evaluations. The report also specifies and sets schedules for closure of monitoring wells and remediation facilities. The report contains risk management measures applicable to further development and/or redevelopment of the site. The report also recognizes that some site management activities for the property will be ongoing after Site Cleanup Requirements are rescinded by the Board.

The Board finds that implementation of the Site Management Plan fulfills the remaining requirements for site closure.

13. **CEQA:** The action is an order to enforce the laws and regulations administered by the Board. This action is categorically exempt from the provisions of the CEQA pursuant to Section 15321 of the Resources Agency Guidelines.

14. **Notification:** The Board has notified the discharger and interested agencies and persons of its intent to prescribe site cleanup requirements and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

15. **Public Hearing:** The Board, in a public meeting, heard and considered all comments pertaining to these requirements.

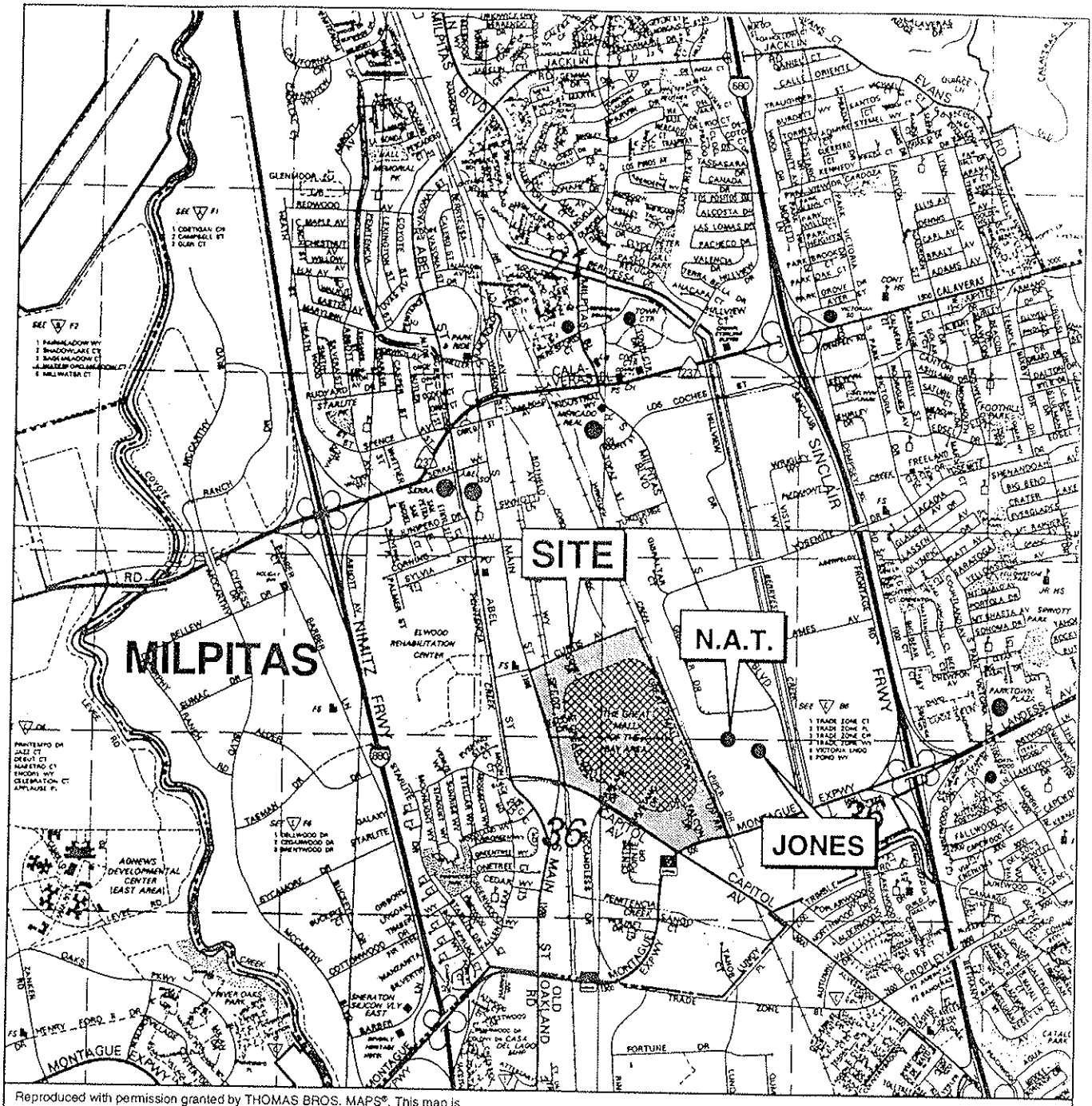
IT IS HEREBY ORDERED that, pursuant to Section 13304 of the California Water Code, Site Cleanup Requirements, Order 90-063 is rescinded.

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on March 19, 1997.

L Barsamian

Loretta K. Barsamian
Executive Officer

Attachments: Figure One, Site Map



GEOMATRIX

SITE LOCATION MAP
Former Ford Automobile Assembly Plant
Milpitas, California

Figure
1

Project No
3341.01E

3341 01E 003